US Army Corps of Engineers

Regulatory Division
1455 Market Street
San Francisco, CA 94103-1398

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

Project: McDaniel Slough Wetland Enhancement – Phases I, II, & III

NUMBER: 2007-274341 DATE: 4 June 2008 RESPONSE REQUIRED BY: 7 July 2008

PROJECT MANAGER: David Ammerman PHONE: 707-443-0855 Email: David.A.Ammerman@spd02.usace.army.mil

1. **INTRODUCTION:** City of Arcata, 736 F Street, Arcata, California 95521 (Contact: Ms. Julie Neander, Environmental Services, 707-822-8184), has applied for a Department of the Army permit to discharge fill into navigable and other waters of the United States (Humboldt Bay and tributaries) associated with implementation of Phases 1, 2, and 3 of the McDaniel Slough Wetland Enhancement Project. The work includes removal, replacement and installation of tide gates, removal of culverts and portions of a levee, construction of flood levees, eco-levees and pond levees, modification and excavation of remnant tidal channels, and other wetland enhancement activities. Work would occur within 212 of 276 acres of former tidelands bounded by existing levees (City of Arcata owns 88 acres and the California Department of Fish and Game owns 166 acres). The project is bounded by Humboldt Bay on the south, Highway 255 (Samoa Boulevard) on the north, the City of Arcata on the east and other private and public tidelands to the west. The project is located near Arcata, Humboldt County, California. This application is being processed pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403) and Section 404 of the Clean Water Act (33 U.S.C. Section 1344). This application is also being processed as a modification of Permit No. 27434N issued on August 8, 2007. This modification would extend the expiration date of the original permit from November 15, 2009 to November 15, 2014.

2. **PROPOSED PROJECT:** The City of Arcata (City) has applied for a permit from the U.S. Army Corps of Engineers (Corps) to discharge fill and to perform other work into navigable waters of the United States (Humboldt Bay, McDaniel Slough and Janes Creek) and wetlands adjacent to navigable waters of the United States. The fill, excavation and structural construction activities would be associated with the City's proposed McDaniel Slough Wetland Enhancement Project. The official purpose of this project is to: "To restore and enhance coastal and riparian wetland habitats on the northern portion of Humboldt Bay by integrating City and State held lands. The Proposed Project will create a self-sustaining tidal marsh through the restoration of natural geomorphic and biologic processes and create brackish and freshwater wetlands on the eastern portion of the site." (Pre-Construction Notification, City of Arcata, May 14, 2008). The City, in cooperation with the California Department of Fish and Game (CDFG), plans to restore tidal wetland functions on 212 of 276 acres of former tidal salt/brackish marsh and freshwater wetlands. The remaining 64 acres would be enhanced and managed as freshwater and brackish ponds, and grassland/riparian areas. The project includes the enhancement of McDaniel Slough and Janes Creek (the former mostly a tidal waterway and the latter non-tidal). The enhancement is designed to remove barriers to fish access and includes deepening historic slough channels, partial removal of failing or obsolete levees, restoring the tidal estuary and creation of brackish and permanent and seasonal freshwater wetlands.

Phase I - Phase I of the project was authorized by the Corps Permit No. 27434N on August 8, 2007. The City began work on Phase I shortly afterwards. Phase I activities completed to date include the eastern freshwater pond, the levees for the brackish pond (and the roosting islands for this pond), and the earthen levees along the eastern portion of the project site. The City has also constructed 1,114 feet of the north east levee and has installed one tide gate structure in that levee. The remaining Phase 1 activities to be completed in 2008 include: continued freshwater pond excavation and construction (East Pond and West Pond), enhance historic slough channels on the eastern portion of the site (1,400 linear feet), remove portions of levee bordering McDaniel Slough to create islands (1,200 linear feet and 3.02 acres in area), construct and plant vegetation on levees on the eastern portion of the site (includes brackish pond levees and levees along east side of V Street), contour the bottom of the future brackish pond, build and vegetate islands in the brackish pond (initial phase of pond operation will be as a seasonal fresh water pond), provide access to PG&E for reinforcing utility towers, construct trails, viewing structures, and information kiosks, plant upland areas with native vegetation, and install stormwater Best Management Practices (BMP's) throughout the project site. Most Phase 1 activities are shown on Sheet 2 of 4 of the project drawings.

Phase II - Phase II activities will include the following to begun in 2008:

Mute culvert – Mute or close a currently open culvert in the levee at the mouth of McDaniel Slough/Janes Creek and adjacent to Humboldt Bay. This culvert, lacking a tide gate or flapper gate, is set lower in elevation than the other three adjacent culverts and tide gates. Work would include re-installation of a tide gate or flapper gate and other apparatus onto the low elevation culvert. Then the tide gate or flapper valve on this low elevation culvert would be closed, preventing tidal waters from entering the borrow ditches and remnant slough channel located on the pasture (or landward) side of the levee. The muting of this culvert would occur sometime during the week of June 2, 2008 to take advantage of ideal minus low tides on the bay. The timing of this muting would also coincide with rising water temperatures and salinity levels at this site. The purpose of muting or closing the culvert at that time would be to prevent salt water from entering the western project area and allow the western project area to dry out in preparation for levee construction work and modification of the remnant channels to enhance tidewater goby habitat. It is unknown how long it will take for the western area to dry out but it could take one construction season to accomplish. Once the culvert is closed, the area upstream of the culvert will be monitored by the applicant to protect existing tidewater goby habitat upstream of the project area (See Sheet 1 of 4).

Construct and revegetate levees on western portion of site - After the culvert described above is closed and the western portion of the project area is dry enough for equipment to work, construction of remaining work on the freshwater ponds would resume, and construction of the western levees and modification of remnant tidal channels would begin (Sheet 1 of 4). The City has proposed expanding seasonal wetlands on CDFG lands west of the western flood levee in order to provide additional soil material, if necessary, to build the western flood levee. However, the City has not provided information on how converting existing agricultural and other wetlands to approximately 41 acres of open water ponds would expand or create seasonal wetlands. At this time, the Corps is not including this proposal in the Phases 2 and 3 of this project. This expansion may be authorized at a later date under a second permit modification.

The following levees would be constructed as part of Phase II:

(a) flood levees – to be constructed along the west side of the proposed project perimeter (Phase II) and along the northeast portion of the project. The flood levees would be constructed with a straight 2.5:1 side slope down to 4.5 feet NGVD (National Vertical Geodetic Datum) and a 5:1 slope on the inboard side

between 4.5 feet and the existing ground surface. Drainage through the new levee would be provided by installing a culvert with tide gate just west of the turn in V Street to connect with an existing remnant tidal channel. Long-term management and maintenance of the proposed project perimeter levees would be the responsibility of the City of Arcata and CDFG.

(b) eco-levees – to be constructed adjacent to private property along the northwest site boundary with Old Samoa Road, along the boundary with the fresh and brackish wetlands, and along the existing levee for Gearheart Marsh. Eco-levees are to be constructed in locations where no further marsh expansion is likely to occur at any time in the future (City of Arcata, PCN to Corps, May 14, 2008). Eco-levees are designed to be permanent features. The eco-levee elevation of +9.00 feet NGVD provides protection against the 100-year extreme tide (includes accounting for sea level rise). The eco-levees would have an approximate 2.5:1 outboard slope down to 4.5 feet NGVD and an approximate 10:1 inboard slope with benched upland slopes on the inboard side between 4.5 and 3.5 feet NGVD. The City estimates that 53,500 cubic yards of material total would be required to construct both types of these levees.

Isolate borrow ditch area, dewater, replace existing culverts and connect to existing levee - A culvert and tide gate would replace an existing tide gate in the borrow ditch north of the bay front levee and would be installed through the newly constructed western levee (Sheet 1 of 4). This culvert and tide gate would allow runoff from the Arcata Bottoms to continue to discharge through McDaniel Slough. The culvert is designed to preserve the existing capacity of the levee borrow ditch. This work would occur during the dry season (August 1 through October 31), and during low freshwater flow and low tide. Water may still be present in the borrow ditch during this time. The city and CDFG staff would isolate this area during seine nets to prevent tidewater gobies from entering the construction area. A temporary coffer dam (unknown material, possibly sandbags or earth fill) would be installed to isolate the work area and dewatering with pumps would occur here. All temporary equipment and materials would be removed after the culvert and tide gate replacement is complete. A second existing culvert in the drainage ditch located just east of the mouth of McDaniel Slough would be removed and the area would be filled to provide PG&E access to an existing utility tower. The same isolation and installation techniques as described above would be used for this culvert replacement.

Modify western remnant tidal channels - Dead-end sloughs connected to McDaniel Slough or connected to other remnant sloughs would be excavated. A sill would be left in place or constructed at the entrance from existing tidal sloughs to the enhancement areas. The sills would create a permanent pool in the enhancement areas (remnant slough reaches to be excavated) that would hold sufficient water to create refugia for aquatic species at low tides. The sills would also prevent scouring velocities within the enhancement areas. The sill would allow tides to flush the enhancement areas only near the peak of tidal cycle when stage changes are not as rapid as flow velocities are low. Sills would be at least ten feet in length constructed of in-situ (available soil surface on site) or by compacting excess soil from excavation. Past the sill, existing depressions and channels would be excavated to create a complex pool. Excavation would create a wide shallow bench along one side of the channel and a deep channel along the other side. The shallow bench would be located at an elevation about 20 to 100 cm below the elevation of the sill. A deep channel should be excavated to depths up to 2 meters below the elevation of the sill. Both edges would undulate in elevation to create a complex environment. The material excavated from the enhancement area would be placed on the south side of the remnant channels, spread over the existing contour surface and planted with vegetation appropriate to anticipated tidal elevations. Emergent wetland vegetation and marsh grass would be planted along the new channel edges and large woody debris would be placed at select locations to provide fish cover and complexity. This is consistent with pre-disturbance bay characteristics. Side channels, constructed in similar geometry to the

larger remnant channels would also be created, to simulate abandoned oxbow channels (City of Arcata, PCN to Corps, May 14, 2008).(See Sheets 1 of 4 and 3 of 4).

Phase III - The following Phase III activities are anticipated to begin in 2008 or beyond:

Remove tide gates - After completing pond excavation, levee construction, remnant channel enhancement, marsh plain work, and planting of vegetation on the levees, the tide gates would be removed from the four culverts at the mouth of McDaniel Slough (Sheet 1 of 4). The culverts would remain in place for a full season (this either means winter season or the next construction season). The City states that the earliest this can occur would be fall of 2008. The City also states that this work may not occur until after the above mentioned work is completed in summer/fall 2009.

McDaniel Slough Culvert Removal - Once the ponds, remnant channel enhancements and levees are completed and one year of tidal exchange has occurred with the existing culverts in place, excavation and removal of all four culverts would occur (Sheet 1 of 4). This is also equivalent to a levee breach. Initially the three higher elevation culverts would be removed first. This work would occur during low tide in late summer or early fall (August/September). The three high culverts would be removed during one to two tide cycles. No excavation below the culverts would occur. The culverts and fill would be excavated to -2.1 to 2.8 feet NGVD to correspond with the existing bottom elevation of the three culverts. At the breach the levee would be contoured to a 1:4 slope. Rock slope protection, ½ to 1 ton, would be placed on the west side of the breach for erosion control and armoring from tides. Once the western side of culvert removal and breach is completed, flow would be directed out the newly created channel by blocking flow to the easternmost (the fourth) and lowest culvert. Top fill would then be removed from the eastern culvert, the culvert would be lifted on an angle to allow it to drain to the bay or McDaniel Slough and then the culvert would be removed from the site. The eastern breach side would be contoured and armored in the same manner as the western side of the breach.

Complete design and build infrastructure for and being operation of brackish marsh - The City states they will work with both the U.S. Fish and Wildlife Service (USFWS) and California Regional Water Quality Control Board (RWQCB), North Coast Region staff to design the brackish pond to meet state and federal standards for use of fully treated waste water to enhance wildlife habitat in this pond. The design will include flexibility to provide optimal fresh water flow rates and tidal exchange volumes both daily and seasonally to mimic the local hydrologic regime in other Humboldt Bay tributaries (greater volume of fresh water flows in the winter months). The brackish pond has been excavated to appropriate elevations for mixing bay water with treated wastewater to create the brackish marsh habitat suitable for vegetation such as widgeon grass. Islands in the brackish marsh would provide roosting and nesting habitat and maximize hydraulic mixing. The pond would receive controlled inflow of freshwater. The freshwater flow would consist of fully treated wastewater discharged by the City of Arcata's wastewater treatment and stormwater system flowing from the South I Street plant location and South I Street pond (See Sheets 2 of 4, 3 of 4 and 4 of 4)..

3. **COMPLIANCE WITH VARIOUS FEDERAL LAWS:**

National Environmental Policy Act of 1969 (NEPA): The Corps will assess the environmental impacts of the proposed action in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. Section 4371 et. seq.), the Council on Environmental Quality's Regulations (40 C.F.R. Parts 1500-1508), and the Corps' Regulations (33 C.F.R. Part 230 and Part 325, Appendix B). Unless otherwise stated, the Environmental Assessment will describe only the impacts (direct, indirect, and cumulative) resulting from activities within the Corps' jurisdiction. The documents used in the preparation of the Environmental Assessment will

be on file with the U.S. Army Corps of Engineers, San Francisco District, Regulatory Division, 1455 Market Street, San Francisco, California 94103-1398.

Endangered Species Act of 1973 (ESA): Section 7 of the Endangered Species Act requires formal consultation with the U.S. Fish and Wildlife Service (FWS) and/or the National Marine Fisheries Service (NMFS) if a Corps permitted project may adversely affect any Federally listed threatened or endangered species or its designated critical habitat. Humboldt Bay, its tributaries, and the McDaniel Slough project site is critical habitat for three salmonid species listed as threatened by the NMFS: The Southern Oregon/Northern California (SONCC) Evolutionarily Significant Unit (ESU) coho salmon (*Oncorhynchus kisutch*), the Northern California (NC) Distinct Population Segment (DPS) steelhead (*O. mykiss*) and Coastal California (CC) ESU Chinook salmon (*O. tshawytscha*) pursuant to the ESA. The Corps of Engineers has initiated informal consultation with the NMFS regarding potential impacts to listed species from the McDaniel Slough Wetland Enhancement Project's Phase 2, and 3 activities (Phase I activities were considered by the Corps to be No Effect to listed species in 2007).

In addition, portions of the project site including certain borrow ditches and remnant tidal channel locations are critical habitat for the tidewater goby (*Eucyclogobius newberryi*), listed as endangered by the USFWS. The tidewater goby is a small fish barely 2 inches long and living for only one year in brackish or some freshwater habitats that represent ecotone or transition areas between freshwater and saltwater. The fish prefer quieter waters away from dynamic tidal activity or freshwater inflow to spawn and rear young. The Corps has initiated formal Section 7 ESA consultation with USFWS regarding potential impacts from the Phases 2 and 3 (and remaining Phase 1 activities) of the McDaniel Slough Wetland Enhancement Project on tidewater gobies and their critical habitat.

Magnuson-Stevens Fisheries Conservation and Management Act: Essential Fish Habitat - The Magnuson-Stevens Fishery Conservation and Management Act requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions permitted by the agency that may adversely affect Essential Fish Habitat (EFH). This notice initiates the EFH consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The EFH impact areas would include portions of Humboldt Bay immediately adjacent to the mouth of McDaniel Slough/Janes Creek and along a shorter portion of levee in the southwest corner of the project. Eventually when all four culverts and tide gates are removed at the mouth of McDaniel Slough and when the open levee breach develops where the four culverts would be removed, there would be changes in volume and velocity of tidal flow, increases in salinity levels, water temperatures and substrate habitat that may impact EFH species such as coho salmon, Chinook salmon and a variety of estuarine and marine fish listed within the Pacific Fishery Management Councils' management plans for pelagic, salmonid, and ground fish managed cooperatively with NMFS. The Corps' initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in California Waters. There may be actually beneficial impacts to EFH species from the proposed project. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

Clean Water Act of 1972 (CWA):

a. Water Quality: Under Section 401 of the Clean Water Act (33 U.S.C. Section 1341), an applicant for a Corps permit must first obtain a State water quality certification before a Corps permit may be issued. The California Regional Water Quality Control Board (RWQCB), North Coast Region, has issued Section 401 Water Quality Certification for Phases 1, 2, and 3 of the McDaniel Slough Wetland Enhancement Project by letter dated July 25, 2007 (WDID NO. 1B06106WNHU), and expires on October 15, 2012.. The 2007 Section 401 Water Quality Certification states that, "The project is expected to result in a total

area of permanent fill to wetlands of 6.5 acres associated with construction of new levees. Upland areas that will be converted to wetlands totals 6.64 acres. A total of 168.1 acres of salt marsh, 11.9 acres of sub-tidal estuarine habitat and 14.7 acres of brackish marsh will be created" In addition, approximately 5.5 acres of freshwater ponds would be created.

Those parties concerned with any water quality issue that may be associated with this project should write to the Executive Officer, California Regional Water Quality Control Board, North Coast Region, 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403 by the close of the comment period of this Public Notice.

b. Alternatives: Evaluation of this proposed activity's impact includes application of the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b)(1) of the Clean Water Act (33 U.S.C. Section 1344(b)). An evaluation has been made by this office under the guidelines and it was determined that the proposed project is water dependent.

Coastal Zone Management Act of 1972 (CZMA): Section 307 of the Coastal Zone Management Act requires the applicant to certify that the proposed project is consistent with the State's Coastal Zone Management Program, if applicable. The proposed project is within the Coastal Zone. The California Coastal Commission (CCC) issued Coastal Development Permit No. 1-06-036 on July 27, 2007, which expires on July 27, 2009. In a recent e-mail correspondence with Mr. James Baskin of the CCC (May 2008), Mr. Baskin states the CCC permit does cover all three phases of the McDaniel Slough Wetland Enhancement Project.

National Historic Preservation Act of 1966 (NHPA): Cultural resources issues were addressed in the *McDaniel Slough Wetland Enhancement Project Draft Environmental Impact Report (DEIS)* Section 4.1, Cultural and Historic Resources, prepared by the City of Arcata, December 2006 which states, "A cultural resources record search was conducted by the City of Arcata at the North Coastal Information Center in December 2002 to determine whether culturally important sites exist within the potential impact area of the project. Several sites were determined to exist in the vicinity and a formal archaeological survey was recommended. In 2003 a Cultural Resource Investigation was conducted at the project site." The City states that a background research included a formal examination of the site records, maps, and survey files of the Northwest Coastal Information Center of the Historic Resources Information System, located at the Yurok Tribal Offices, Klamath, California. The City and associated researchers determined that the project would result in a less than significant impact with the incorporation of mitigation measures. One of the measures states that a representative from the Wiyot Tribe or a trained archaeological monitor shall be on site to oversee excavation of the ponds and levees in the eastern most portion of the project. A cultural resources monitor shall ensure that significant cultural deposits are quickly recognized and recorded. If unrecorded resources are discovered during construction of the project, operations will be suspended until the Corps completes consultation with the State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO) in accordance with Section 106 of the National Historic Preservation Act.

4. **PUBLIC INTEREST EVALUATION:** The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits that reasonably may be expected to accrue from the proposed activity must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including its cumulative effects. Among those factors are: conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion,

recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

5. **CONSIDERATION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest in the proposed activity.

6. **SUBMISSION OF COMMENTS:** Interested parties may submit, in writing, any comments concerning this activity. Comments should include the applicant's name and the number and the date of this Public Notice, and should be forwarded so as to reach this office within the comment period specified on Page 1. Comments should be sent to the U.S. Army Corps of Engineers, San Francisco District, Regulatory Division, 1455 Market Street, San Francisco, California 94103-1398. It is the Corps' policy to forward any such comments that include objections to the applicant for resolution or rebuttal. Any person may also request, in writing, within the comment period of this Public Notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Additional details may be obtained by contacting the applicant whose name and address are indicated in the first paragraph of this Public Notice or by contacting David Ammerman of our Eureka Office at telephone 707-443-0855 or Electronic mail at this address: David.A.Ammerman@spd02.usace.army.mil. Details on any changes of a minor nature that are made in the final permit action will be provided upon request.